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1994 Feature Article - Business Expectations Survey
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Introduction

Economic forecasting relies on information from a range of sources about trends in the economy and its component sectors. In Australia, the most important information is provided by the quarterly National Accounts but other important sources are the partial economic indicators released by the ABS, quarterly and monthly, including leading indicators such as building approvals and job vacancies and measures of business expectations.

Surveys of prospective trading conditions are assessed by economic analysts as being important because they provide the only systematic compilation of information on expected trends in the economy. Most official statistics are backward looking in measuring the actual level of activity for a past period.

Business expectations surveys have increasingly been accepted in Australia as providing a guide to likely developments as perceived by business decision-makers, perceptions which can become self-fulfilling because of the powerful role of expectations in shaping economic behaviour.

Prior to 1993 such surveys were conducted almost exclusively by the private sector, by employer organisations and banks. The only official statistics in this field were obtained from the ABS surveys of New Fixed Capital Expenditure and Stocks and Manufacturers Sales which , respectively, collect expectations of future capital investment by private businesses and expected sales of goods manufactured by private manufacturing businesses.

Need for a separate ABS Business Expectations Survey

The reliability of most surveys conducted by the private sector is limited by their small sample size, and the extent of their coverage by size of business and industry. Furthermore, the absence of any measure of the magnitude of expected change from these surveys means that the results cannot be used quantitatively to refine economic forecasts, in particular the forecasting of future levels of economic activity and the provision of early warnings about turning points in the economy.

For some time the ABS had recognised a need to have a more active involvement in the field of expectations statistics. In 1992, the Government funded the ABS to develop a comprehensive, and statistically robust survey which would be able to deliver a quantitative measure of expected economic activity for a range of business performance indicators.

Development of the ABS Survey

Following consultations with many large private and government organisations about their interest in and views on the new survey which ABS was proposing, the following design objectives were established for the survey:

- the survey was to cover as much as possible of the trading goods and services part of the economy;

- a quantitative measure of expected change over a short (3 months) and longer term (12 months) period was needed;

- results were to be based on weighted responses with regard to the size of businesses;

- business of all size ranges and all industries were to be represented;

- questions to be completed by business executives were to impose the minimum burden; and

- results were to be published before the start of the expectations reference period.

Although a long list of potential topics were proposed for inclusion in the survey, data reporting and definitional difficulties together with the need to minimise response load, yet maintain high levels of informant response in a timely manner, placed limits on the topics that could be included. Subsequent testing refined the list to the following core business indicators:

- Sales of Goods and Services

- Selling Prices

- Profits

- Capital Expenditure

- Stock Levels

- Employment

- Labour Costs (wage and non-wage)

- All Other Expenses

- Imports and

- Exports

These indicators are not only of interest in themselves in signalling future levels of aggregate economic activity, but also provide insights into the changing composition of activity in successive business cycles.

The reference periods chosen for the survey were a short expectation period, the next calendar quarter in comparison with the current quarter, and a longer term period comparing expectations for the same quarter of the following year with the current quarter. Adoption of these reference periods would enable the data to be used for economic forecasting by linking it to other calendar quarter economy-wide economic measures of actual activity, such as the Australian National Accounts and other quarterly indicators.

Statistical Design

To minimise the reporting burden on managers and executives of businesses selected in the survey an extremely simple questionnaire was developed which only seeks responses about expected percentage changes for each of the business performance indicators rather than actual or expected levels.

The BES sample has been designed to suit the chosen estimation scheme and involves several new features.

Firstly, the ABS has access to both a comprehensive business register from which to select a representative sample; as well the ABS conducts an annual economy-wide survey, the Economic Activity Survey (EAS) which provides aggregate annual information on most of the indicators included in the BES. The statistical design for the business expectations survey uses both a sub-sample of businesses drawn from the EAS, for existing businesses, and a sample drawn directly from the business register for businesses newly registered.

Secondly, because the BES is largely a sub-sample of the EAS, the EAS is able to provide the benchmark or actual levels of reported activity used in weighting individual responses and in allowing responses from different businesses to be aggregated. However, the EAS does not cover all the data items present in the BES such as imports, exports and selling price details. Furthermore, while the EAS does provide profit/loss data, the EAS benchmark has not been used in the estimation process because of the problems dealing with a benchmark which is so volatile and which can have a negative value.

Thirdly, in the absence of any natural benchmark for selling prices the benchmark chosen was total expenses which is considered the most appropriate economic indicator correlated with selling prices. For expected profit/loss, a synthetic estimate has been devised under which profit/loss is derived as the difference between the new benchmark for the item sales of goods and services and the new benchmark for the sum of the items: wage costs, non-wage labour costs and all other expenses. The new benchmark is calculated by applying the expected change percentage to the EAS benchmark. An additional question is included in the survey to provide a more up-to-date indication of whether the business is in a profit or a loss situation.

The total sample size of the BES is 3,000 units, allocated by industry and size of business, as shown in tables 1 and 2.

TABLE 1. 1994 BES SAMPLE ALLOCATION BY ANZSIC INDUSTRY CLASSIFICATION

Industry (ANZSIC)	Per cent
A. Agriculture(1)	0.0
B. Mining	8.0
C. Manufacturing	33.8
D. Electricity, gas and water supply(2)	2.6
E. Construction	6.2
F. Wholesale trade	5.0
G. Retail trade	8.7
H. Accommodation, cafes and restaurants	4.5
I. Transport and storage(2)	7.9
J. Communication services(2)	1.2
K. Finance and Insurance	3.7
L. Property and business services	8.2
M. Government administration and defence(1)	0.0
N. Education(3)	1.1
O. Health and community services(3)	4.5

P. Cultural and recreation servicers(3)	1.7
Q. Personal and other services	2.9
Total	**100.0**

(1) Excluded from the scope of the survey.
(2) Includes Government business enterprises.
(3) Excludes Government organisations.

TABLE 2. 1994 BES SAMPLE ALLOCATION BY SIZE OF BUSINESSES

Size	Definition	Per cent
Small	Less than 20 employees or less than 100 employees if in Manufacturing industry.	40.9
Medium	20 to 99 employees or 100 to 499 employees if in Manufacturing industry	20.5
Large	More than 100 employees or more than 499 employees if in Manufacturing industry.	38.6

Business Expectations for States and Territories

Investigations into data availability indicated serious difficulties in obtaining expectations about future activity at a State level from businesses operating in more than one State because the selection unit for BES and EAS is an Australia-wide unit, not one generally delimited by State. The distribution of the sample by State and Territory is presented in table 3.

TABLE 3. 1994 BES SAMPLE DISTRIBUTION BY STATE AND TERRITORY

State/Territory	Per cent
New South Wales	38.8
Victoria	27.4
Queensland	13.0
South Australia	6.7
Western Australia	9.7
Tasmania	2.0
Northern Territory	0.9
Australian Capital Territory	1.4
AUSTRALIA	**100.0**

For large and many medium-sized businesses the State of selection reflects the head office of the Australia-wide unit, and therefore to obtain State expectations data a synthetic estimation process is used in which sales expectations for each State/Territory are estimated by applying the proportion of a business' economic activity contributed by each State to the benchmark and attributing the same, ie Australian-level sales expectation, to each State in which the business operates. To facilitate this process, selected businesses are required to provide the percentage of the economic activity contributed by each State or Territory segment of the business.

Caution should be exercised by users of expectations data for State activity because it is derived

from information about the reporting unit's current rather than expected State activity. In some cases this may not reflect the changing nature of a businesses future activity and in a few cases the geographical reporting arrangements for a particular business may not reflect actual Australian States.

Almost all small businesses and about 50 per cent of medium size businesses report for only one State with all others reporting for a two or more States.

State expectations are only published for sales of goods and services but reports for the remaining business performance indicators can be provided on request for small business which typically report for only one State/Territory.

Qualitative and Quantitative Measures

Most of the surveys of business expectations conducted by employer organisations or banks produce a measure of expected change expressed as an index of net balance. This index is derived as the difference between the percentage of businesses expecting a decrease and the percentage of businesses expecting an increase (for sales, profits, investment, employment etc).

When, for example, 44 per cent of businesses surveyed report that their sales are expected to increase, and 21 per cent expect their sales to decrease, the index is a positive 23. In a subsequent survey the net balance index for expected sales may change to 28 (48 per cent up, 20 per cent down) indicating a prospective improvement in expected trading conditions with a change in the index from 23 to 28. However, a net balance index is more in the nature of a qualitative measure of business confidence and it is not possible to gauge any quantitative measure of expected change from the index.

A simple net balance index can provide a useful indication of business sentiment about future business conditions but it suffers from the limitation of being based on responses which are unweighted with respect to the size of reporting businesses, that is each business is given an equal weight regardless of its size.

As an alternative to the simple net balance the ABS has produced from the BES a weighted net balance in which a weight is assigned to each selected business according to its relative size as measured by its economic contribution to sales, profits, capital expenditure, employment etc.

The impact of this weighting is demonstrated in table 4 in which the simple unweighted net balance is compared with a weighted net balance for the four quarters for which the BES has been conducted.

TABLE 4. BUSINESS EXPECTATIONS, UNWEIGHTED AND WEIGHTED NET BALANCE OF BUSINESSES EXPECTING AN INCREASE OR DECREASE IN ACTIVITY

	Sales		Employment	
Quarter	Unweighted	Weighted	Unweighted	Weighted
Dec 1993	27	45	0	-16
Mar 1994	6	4	-4	-13
June 1994	48	47	3	-12
Sept 1994	49	54	12	-2

For the December quarter sales the effect of the weighting process indicates that businesses expecting an increase tend on average to be larger than those expecting a decrease. Conversely, for September quarter employment the weighting shows that businesses expecting a decrease in employment are larger, on average, than those businesses expecting to increase their employment in the quarter.

Seasonality

It is ABS policy to capture original data and for the ABS to apply seasonal adjustment to the data once a suitable time series has been collected and seasonal patterns in the actual data analysed.

The data presented in the Australian Business Expectations publication (5025.0) is not seasonally adjusted. Respondents to the survey are advised to report on any expected change, even though such change may be the result of seasonal variations and abnormal circumstances. Post-enumeration studies have indicated that this direction is being followed. The series of data obtained from the BES surveys to date is not sufficiently long for a seasonally adjusted series to be determined at this time. However the reference periods for BES are for a short term and medium term forecast and while the short term forecast is likely to be heavily influenced by seasonal factors the medium term forecast is unlikely to be affected.

It is usual for five years data (five observations of each quarter's data) to be available before a reliable seasonally adjusted series can be provided.

Quality

From an examination of the responses provided by individual businesses it does appear to be predictive of actual outcomes for individual businesses. However, future plans by one business can have ramifications for another businesses but will be unknown by other businesses until put into effect and therefore cannot be included in their expectations responses.

For example, a business may report an expected decrease in its employment as a result of a decision to outsource a particular activity such as catering. However, any other business which may expand as a result of acquiring some or all of the intended outsourcing will be unaware of the expected additional business and its own reported expectations will not be able to reflect any growth.

The data from the EAS which is used to benchmark data items in the BES is historical and becomes increasingly out of date over the course of a year until a new sample is selected and new benchmarks applied. Provided that businesses change proportionally to one another, the age of the benchmark data is no cause for concern. However should the relationship between businesses dramatically change, the aggregation of the movement reported in the BES would be based on inappropriate weighting.

The extent of any bias introduced as a result of using historical data cannot be measured from the data but the likely extent of bias has been estimated using other ABS data. Every effort has been made to minimise this bias including the use of modelling techniques to improve benchmarks.

Although part of the sample for the survey is drawn directly from the ABS Business Register to reflect new business registrations, inevitable lags associated with updating registers from administrative sources mean that it may be, in some circumstances up to 1 or 2 years before a newly registered business is selected or represented in the survey.

Survey Results

Results of the first four surveys are presented in tables 5, 6, 7 and 8. Changes in business expectations for the short and medium term outlook are presented in tables 5 and 6 in the form of a weighted net balance. Business expectations expressed as a percentage aggregate change are presented in tables 7 and 8.

TABLE 5. PER CENT WEIGHTED NET BALANCE OF BUSINESSES EXPECTING AN INCREASE OVER THE PREVIOUS QUARTER
(not seasonally adjusted)

Business performance Indicators	Short Term Outlook for quarter ending -			
	Dec 93	**Mar 94**	**June 94**	**Sept 94**
Trading performance				
Sales	45	4	47	54
Selling prices	44	26	37	30
Profit	n.a.	46	18	-2
Investment				
Capital Expenditure	27	20	46	46
Stocks	-30	-28	-14	6
Employment	-16	-13	-12	-2
Operating Expenses				
Wages	25	29	40	44
Non-wage labour	29	22	37	44
Other	46	26	46	55
International Trade				
Imports	18	-6	27	60
Exports	14	9	13	36

TABLE 6. PER CENT WEIGHTED NET BALANCE OF BUSINESSES EXPECTING AN INCREASE OVER THE CORRESPONDING QUARTER OF THE PREVIOUS YEAR
(not seasonally adjusted)

Business performance Indicators	Medium Term Outlook for quarter ending			
	Sept 94	**Dec 94**	**Mar 95**	**June 95**
Trading performance				
Sales	65	60	70	69
Selling prices	30	46	51	59
Profit	na	64	47	42
Investment				
Capital Expenditure	41	25	35	50
Stocks	-1	16	5	43
Employment	0	12	12	29
Operating Expenses				
Wages	52	59	59	67
Non-wage labour	35	55	53	53
Other	67	55	66	71
International Trade				
Imports	30	14	37	71
Exports	28	20	22	54

TABLE 7. SHORT TERM OUTLOOK
Australian Business Expectations - December Quarter 1993, March Quarter 1994, June Quarter 1994 and September Quarter 1994
Expected Aggregate Change (not seasonally adjusted)

Business performance Indicators	Expected aggregate change over the previous quarter (%)			
	December quarter 1993	March quarter 1994	June quarter 1994	September quarter 1994
Trading performance				
Sales	3.6	-1.4	1.9	1.9
Selling prices	0.0	0.4	0.5	0.4
Profit	5.0	-19.6	4.4	8.0
Investment				
Capital Expenditure	1.1	-1.2	4.2	2.5
Stocks	-1.2	-0.7	0.1	1.0
Employment	-0.8	-1.1	-0.2	-0.1
Operating Expenses				
Wages	0.8	0.5	1.1	1.2
Non-wage labour	0.5	0.5	1.0	0.9
Other	1.7	0.3	1.3	1.0
Total	1.5	0.3	1.3	1.0
International Trade				
Imports	-1.0	-1.7	1.6	2.4
Exports	1.3	1.1	1.3	-0.1

TABLE 8. MEDIUM TERM OUTLOOK
Australian Business Expectations - September Quarter 1994, December Quarter 1994, March Quarter 1995 and June Quarter 1995
Weighted Expected Aggregate Change (not seasonally adjusted)

Business performance Indicators	Expected aggregate change over the corresponding quarter of the previous year(%)			
	September quarter 1994	December quarter 1994	March quarter 1995	June quarter 1995
Trading performance				
Sales	2.9	3.1	3.9	3.3
Selling prices	0.6	1.3	1.3	1.5
Profit	6.8	17.8	20.4	11.7
Investment				
Capital Expenditure	1.5	-0.2	0.1	2.8
Stocks	0.5	-0.2	0.1	1.4
Employment	-0.9	-0.5	-0.1	-0.3
Operating Expenses				
Wages	1.1	1.9	1.8	2.2
Non-wage labour	0.0	1.8	1.3	1.8
Other	2.5	1.6	1.7	2.1
Total	2.3	1.6	1.7	2.1
International Trade				
Imports	0.0	0.0	0.6	2.8
Exports	2.6	2.0	1.8	2.6

The short term expectations are affected by seasonal variations in addition to any underlying movement in economic activity. This is most evident in changes in the net balance between the December and March quarters for sales, profit, capital expenditure, non-wage labour and other operating expenses. For the medium term outlook any seasonal influences are slight and the underlying real movement is more discernible.

With only four quarters of expectations currently available there is as yet insufficient data to undertake a detailed analysis of how expectations align with actual outcomes.

Published and Unpublished Data

The published data from the survey represents the broadest aggregate level. There are a number of data items which are not currently published but which may be made available from this survey. Capital expenditure can be broken down into its component parts of plant machinery and equipment and buildings and expectations data by industry can be provided for a finer level of industry disaggregation (2 digit ANZSIC) and for small businesses. State data has been derived for each data item, not only sales of goods and services. Other unpublished data available on request includes broad industry groups by size of business and data for finer level or different size classifications to those published.

Conclusion

The ABS Business Expectations Survey is the largest survey of its type conducted in Australia covering the whole trading goods and services sectors of the Australian economy and businesses of all sizes. It is the first dedicated business expectations survey conducted by the ABS and extends the range of available economic performance indicator statistics.

The ABS believes that the nature of the survey design may be unique for a national statistical agency. Although there are a number of well established business surveys conducted both in Australia and other countries there does not appear to be any other survey which provides a quantifiable measure of business expectations for the range of business performance indicators covered in the ABS Business Expectations Survey.

This feature article was contributed by Frank Parsons and Dick Sims, ABS.